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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/966,507	09/28/2001	Kang-Hyun Jo	678-624(P9625)	5307
28249	7590	07/10/2006	EXAMINER	
DILWORTH & BARRESE, LLP 333 EARLE OVINGTON BLVD. UNIONDALE, NY 11553			TORRES, JUAN A	
			ART UNIT	PAPER NUMBER
			2611	

DATE MAILED: 07/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/966,507

Applicant(s)

JO ET AL.

Examiner

Juan A. Torres

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– The MAILING DATE of this communication appears on the cover sheet with the correspondence address –  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 22 June 2006.  
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-6 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-6 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_.  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Response to Arguments***

#### Regarding claim 1:

Applicant's arguments filed on 06/22/2006 have been fully considered but they are not persuasive.

The Applicant contends, "Regarding the Examiner's rejection of independent Claim 1, the Examiner states that Kosiec does not teach or suggest a controller configured to control the radio transmitted portion to operate only during a transmission burst period and to control the radio reception portion to operate only during a reception burst period, as recited in Claim 1. However, the Examiner uses Hietala to cure this deficiency. After reviewing Hietala, it is respectfully submitted that the Examiner is incorrect. Hietala discloses a phase detector for a phase locked loop (PLL) that minimizes false locks between the phase of the divided reference frequency signal and the phase of a divided voltage controlled oscillator frequency signal (Column 6, lines 49-53). With reference to FIG. 1, Hietala teaches a transceiver having a switch 102 for switching an antenna between transmit and receive RF (radio frequency) signal lines (111 and 113). In other words, Hietala teaches a switch for switching an antenna lead between IF transmit and RF receive lines. However, Hietala does not teach or suggest a controller to control the radio transmitter portion to operate only during a transmission burst period and to control the radio reception portion to operate only during a reception burst period. Accordingly, as Hietala does not cure Kosiec's deficiency, it is respectfully requested that the rejection under 35 USC 103(a) of Claim 1 be withdrawn".

The Examiner disagrees and asserts, that, as indicated in the previous Office Action, Hietala discloses to control the radio transmitter portion to operate only during a transmission burst period and to control the radio reception portion to operate only during a reception burst period (figure 2 blocks 218 and 219; column 9 lines 1-7 and 33-53). For these reasons and the reasons indicated in the previous Office Action the rejections of claim 1 is maintained.

Regarding claim 2, 3 and 5:

Applicant's arguments filed on 06/22/2006 have been fully considered but they are not persuasive.

The Applicant contends, "Regarding the Examiner's rejection of independent Claims 2, 3, and 5, these claims include similar subject matter as contained in Claim 1. Accordingly, it is believed that Claims Claims 2, 3, and 5 are allowable for at least the same reasons as set forth above with respect to the rejection of Claim 1. Withdrawal of the rejection of Claims 2, 3, and 5 is respectfully requested".

The Examiner disagrees and asserts, that, because the rejection of claim 1 is maintained, the rejections of claims 2, 3 and 5 are also maintained.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kosiec (US 5838202 A) in view of Hietala (US 6327319 B1).

As per claim 1, Kosiec discloses an apparatus for generating transmission local oscillation signals and reception local oscillation signals in a mobile terminal, comprising a first phase locked loop (PLL) block configured to generate a transmission local oscillation signal (figure 1 block 109; column 1 line 29 to column 2 line 32); a radio transmitter portion for receiving the transmission local oscillation signal (figure 1 block 105; column 1 line 29 to column 2 line 32); a second PLL block for generating a reception local oscillation signal (figure 1 block 108; column 1 line 29 to column 2 line 32); a radio reception portion for receiving the reception local oscillation signal (figure 1 block 103; column 1 line 29 to column 2 line 32); and a controller configured to control the first PLL block to operate before a minimum time period required for the first PLL block to lock up from the start point of a transmission burst period, and to control the second PLL block to operate before a minimum time period required for the second PLL block to lock up from the start point of a reception burst period (figure 1 blocks 110 and 118; column 1 line 29 to column 2 line 32). Kosiec doesn't disclose to control the radio transmitter portion to operate only during a transmission burst period and to control the radio reception portion to operate only during a reception burst period. Hietala discloses to control the radio transmitter portion to operate only during a transmission burst period and to control the radio reception portion to operate only during a reception burst period (figure 2 blocks 218 and 219; column 9 lines 1-7 and 33-53). Kosiec and Hietala teachings are analogous art because they are from the same field of endeavor. At the

time of the invention it would have been obvious to a person of ordinary skill in the art to incorporate the time division multiplexed (TDM) selectivity to switch between the RF received signal by Hietala in PLL error suppression system and method disclosed by Kosiec. The suggestion/motivation for doing so would have been to use the system in the GSM standard (Hietala column 8 lines 17-48).

As per claim 2, Kosiec discloses an apparatus for generating a transmission local oscillation signal and a reception local oscillation signal in a mobile terminal, comprising a first PLL block configured to generate the transmission local oscillation signal (figure 1 block 109; column 1 line 29 to column 2 line 32); a radio transmitter portion for receiving the transmission local oscillation signal (figure 1 block 105; column 1 line 29 to column 2 line 32); a second PLL block configured to generate the reception local oscillation signal (figure 1 block 108; column 1 line 29 to column 2 line 32); a radio reception portion for receiving the reception local oscillation signals (figure 1 block 103; column 1 line 29 to column 2 line 32); and a controller for controlling the first PLL block to operate before an end point of a reception burst period for controlling the second PLL block to operate before an end point of a transmission burst period (figure 1 blocks 110 and 118; column 1 line 29 to column 2 line 32). Kosiec doesn't disclose controlling the radio transmitter portion to operate only during a transmission burst period and for controlling the radio reception portion to operate only during a reception burst period. Hietala discloses to control the radio transmitter portion to operate only during a transmission burst period and to control the radio reception portion to operate only during a reception burst period (figure 2 blocks 218 and 219; column 9 lines 1-7 and 33-53). Kosiec and Hietala

teachings are analogous art because they are from the same field of endeavor. At the time of the invention it would have been obvious to a person of ordinary skill in the art to incorporate the time division multiplexed (TDM) selectivity to switch between the RF received signal by Hietala in PLL error suppression system and method disclosed by Kosiec. The suggestion/motivation for doing so would have been to use the system in the GSM standard (Hietala column 8 lines 17-48).

As per claim 3, Kosiec discloses a method of generating a transmission local oscillation signal and a reception local oscillation signal in a mobile terminal having a first PLL block for generating the transmission local oscillation signal and a second PLL block for generating the reception local oscillation signal (figure 1 blocks 108 and 109; column 1 line 29 to column 2 line 32), comprising controlling the first PLL block to operate before a minimum time period required for the first PLL block to lock up from the start point of a transmission burst period (figure 1 blocks 109, 110 and 118; column 1 line 29 to column 2 line 32); controlling the second PLL block to operate before a minimum time period required for the second PLL block to lock up from the start point of a reception burst period (figure 1 blocks 108, 110 and 118; column 1 line 29 to column 2 line 32). Kosiec doesn't disclose controlling the radio transmitter portion to operate only during a transmission burst period and for controlling the radio reception portion to operate only during a reception burst period. Hietala discloses to control the radio transmitter portion to operate only during a transmission burst period and to control the radio reception portion to operate only during a reception burst period (figure 2 blocks 218 and 219; column 9 lines 1-7 and 33-53). Kosiec and Hietala teachings are

analogous art because they are from the same field of endeavor. At the time of the invention it would have been obvious to a person of ordinary skill in the art to incorporate the time division multiplexed (TDM) selectivity to switch between the RF received signal by Hietala in PLL error suppression system and method disclosed by Kosiec. The suggestion/motivation for doing so would have been to use the system in the GSM standard (Hietala column 8 lines 17-48).

As per claim 4, Kosiec and Hietala disclose claim 3. Kosiec also discloses applying the reception local oscillation signal generated from the second PLL block to a radio receiver for the reception burst period (figure 1 block 116; column 1 line 29 to column 2 line 32); and applying the transmission local oscillation signal generated from the first PLL block to the radio transmitter for the transmission burst period (figure 1 block 117; column 1 line 29 to column 2 line 32).

As per claim 5 Kosiec discloses a method of generating a transmission local oscillation signal and a reception local oscillation signal in a mobile terminal having a first PLL block for generating the transmission local oscillation signal and a second PLL block for generating the reception local oscillation signal (figure 1 blocks 108 and 109; column 1 line 29 to column 2 line 32) comprising controlling the first PLL block to operate before the end point of a reception burst period (figure 1 blocks 109, 110 and 118; column 1 line 29 to column 2 line 32); controlling the second PLL block to operate before the end point of a transmission burst period (figure 1 blocks 108, 110 and 118; column 1 line 29 to column 2 line 32). Kosiec doesn't disclose controlling the radio transmitter portion to operate only during a transmission burst period and for controlling



the radio reception portion to operate only during a reception burst period (figure 2 blocks 218 and 219; column 9 lines 1-7 and 33-53). Hietala discloses to control the radio transmitter portion to operate only during a transmission burst period and to control the radio reception portion to operate only during a reception burst period.

Kosiec and Hietala teachings are analogous art because they are from the same field of endeavor. At the time of the invention it would have been obvious to a person of ordinary skill in the art to incorporate the time division multiplexed (TDM) selectivity to switch between the RF received signal by Hietala in PLL error suppression system and method disclosed by Kosiec. The suggestion/motivation for doing so would have been to use the system in the GSM standard (Hietala column 8 lines 17-48).

As per claim 6 Kosiec and Hietala disclose claim 5. Kosiec also discloses applying the reception local oscillation signal generated from the second PLL block to a radio receiver for the reception burst period (figure 1 block 116; column 1 line 29 to column 2 line 32); and applying the transmission local oscillation signal generated from the first PLL block to a radio transmitter for the transmission burst period (figure 1 block 117; column 1 line 29 to column 2 line 32).

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not

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mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Juan A. Torres whose telephone number is (571) 272-3119. The examiner can normally be reached on Monday-Friday 9:00 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mohammad H. Ghayour can be reached on (571) 272-3021. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Juan Alberto Torres  
6-30-2006

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PRIMARY EXAMINER  
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